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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,822	12/29/2003	Haim Niv	357/03772	7173
44909	7590	11/04/2005	EXAMINER	
WOLF, BLOCK, SCHORR & SOLIS-COHEN LLP			BARKER, MATTHEW M	
250 PARK AVENUE			ART UNIT	
NEW YORK, NY 10177			PAPER NUMBER	

3662

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/748,822	Applicant(s) NIV, HAIM	
	Examiner Matthew M. Barker	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-58 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-44 and 53-54, drawn to a method and apparatus for terrain mapping and/or obstacle detection, classified in class 342, subclass 63.
 - II. Claims 45-52, drawn to a method of performing radar measurements, classified in class 342, subclass 99.
 - III. Claim 55, drawn to a method of polarization stabilization, classified in class 342, subclass 188.
 - IV. Claims 56-58, drawn to a method of providing wire detection capability, classified in class 342, subclass 27.

The inventions are distinct, each from the other because of the following reasons:

Inventions I, II, III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are distinct methods with different functions, none of which require any of the other methods to be performed.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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2. Upon election of invention I, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

A. The embodiment that determines the range and azimuth. (Claims 1-40)

B. The embodiment that displays a distorted contour. (Claims 41-44)

Claims 53-54 will also be examined upon the election of invention A or B.

3. Upon election of invention II, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, claims 45-48 are generic):

C. The embodiment where the attribute is frequency. (Claim 49)

D. The embodiment where the attribute is polarization. (Claim 50)

E. The embodiment where the attribute is an antenna connection.
(Claim 51)

F. The embodiment where the attribute is beam position. (Claim 52)

4. Upon election of invention III, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits

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to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, claim 56 is generic):

G. The embodiment where the angle is equal to or below $\pm 90^\circ$. (Claim 57)

H. The embodiment where the angle is equal to or above $\pm 90^\circ$.
(Claim 58)

5. Upon election of invention A, further restriction to one of inventions a-k is required under 35 U.S.C. 121. Claim 1 will be examined with any one of inventions a-k.

- a. Claims 2-4 and 29-30, drawn to determining the azimuth, angle or elevation, classified in class 342, subclass 140.
- b. Claims 5-10, drawn to generating a display, classified in class 342, subclass 176.
- c. Claim 11, drawn to providing warnings, classified in class 342, subclass 65.
- d. Claims 12-15 and 37-38, drawn to determining the angle, classified in class 342, subclass 157.
- e. Claims 16-19, drawn to suppressing backscatter, classified in class 342, subclass 73.
- f. Claims 20-22, drawn to resolving elevation ambiguity, classified in class 342, subclass 175.

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- g. Claims 23-25, drawn to responding in the event of elevation or azimuth ambiguity, classified in class 342, subclass 63.
- h. Claim 26-27, drawn to separating ground reflections from object backscatter, classified in class 342, subclass 159.
- i. Claim 28, drawn to quantizing differences in Doppler shift, classified in class 342, subclass 74.
- j. Claim 31-33, 35-36, and 39-40, drawn to wire detection, classified in class 342, subclass 27.
- k. Claim 34, drawn to determining wire orientation, classified in class 342, subclass 147.

Inventions a-k are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention a is separately useable from the others to determine the azimuth, angle, or elevation of any vehicle, including land. Invention b is separately useable to generate a display of surrounding objects for any vehicle. Invention c is separately useable from the others to warn any vehicle operator of an impending collision. Invention d is separately useable from the others to determine the direction of an object in relation to any vehicle. Invention e is separately useable from the others to suppress backscatter in any radar system. Invention f is separately useable from the others to determine the elevation of any aircraft. Invention g is separately useable from the others to resolve elevation ambiguity. Invention h is

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separately useable from the others to eliminate clutter. Invention i is separately useable from the others to process any Doppler radar data. Invention j is separately useable from the others to determine the existence of any object. Invention k is separately useable from the others to determine the location of any object. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. Upon election of invention a, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, claims 2 and 29-30 are generic):

- (i). The embodiment utilizing an off-axis monopulse azimuth estimation scheme. (Claim 3)
- ii. The embodiment utilizing interferometry. (Claim 4)

7. Upon election of invention b, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

- iii. The embodiment displaying the location of cells. (Claim 5)
- iv. The embodiment displaying the intensity of cells. (Claim 6)

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v. The embodiment displaying sky-line contours based on cells.

(Claims 7-10)

8. Upon election of invention d, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims are generic):

vi. The embodiment that determines the angle using interpolation.

(Claims 12, 14-15)

vii. The embodiment that determines the angle using spectral analysis.

(Claims 13, 37-38)

9. Upon election of invention g, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claim is generic):

viii. The embodiment where the response is to pull-up or push-down.

(Claims 23-24)

ix. The embodiment where the response is to choose a direction based on received power. (Claim 25)

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10. Upon election of invention j, the applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claim is generic):

- x. The embodiment utilizing detection of spacing between obstacles to detect wires. (Claim 31)
- xi. The embodiment utilizing backscatter intensities to detect wires. (Claims 32-33, 35-36)
- xii. The embodiment utilizing the azimuth to detect wires. (Claims 39-40)

11. A telephone call was made to William H. Dippert on 10/25/2005 to request an oral election to the above restriction requirement, but did not result in an election being made.


Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143). Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew M. Barker whose telephone number is (571)272-3103. The examiner can normally be reached M-F, 8:00 AM-4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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